

Amendments To The Claims:

This listing of the claims will replace all prior versions and listings of the claims in the application.

Listing of the Claims:

1. (Currently Amended) A method for recovering data from flash media, comprising:

accessing the flash media at a low level to access raw flash data stored on the flash media by defining an application program interface (API) comprising a set of pass-through commands to enable a software program to low-level access of the flash media using the set of pass-through commands;

searching the raw flash data for file indicia ~~corresponding to a selected file type~~; and

reading data from the raw flash data based on information in the file indicia, said data comprising a recovered file.
2. (Original) The method of claim 1, wherein the flash media comprises a SmartMedia compatible device.
3. (Original) The method of claim 1, wherein the flash media comprises a Sony Memory Stick-compatible device.
4. (Original) The method of claim 1, further comprising storing the data corresponding to the recovered file in a new file.
5. (Original) The method of claim 4, further comprising enabling a user to name the new file.
6. (Original) The method of claim 1, further comprising:

building a physical-to-logical table mapping physical storage locations to logical storage locations; and

sequentially searching through logical sectors in search of the file indicia based on the

physical-to-logical table.

7. (Currently Amended) The method of claim 1, wherein the file indicia comprises a file header, and in response to finding a the file header the method includes performing the steps operations of:

extracting a file size from the file header corresponding to a file;

reading data beginning with the file header or a starting point identified by the file header up to the file size.

8. (Original) The method of claim 1 further comprising:

determining a starting location from which to search the flash media; and sequentially searching through the flash media for file indicia using one of a physical or logical storage sequence.

9. (Canceled) The method of claim 1, further comprising:

~~defining an application program interface (API) comprising a set of pass-through commands to enable a software program to low-level access of the flash media using the set of Pass-through commands; and~~

~~employing the software program to access the raw flash data searching for file indicia and reading the corresponding recovered file data via the API calls.~~

10. (Currently Amended) The method of claim 9 1, further comprising:

defining an API including a plurality of respective sets of pass-through commands, each respective set corresponding to a specific type of flash media;

determining a type of the flash media; and

employing the set of pass-through commands corresponding to the type of flash media determined with the software program to recover the file.

11. (Canceled) A method for recovering data from flash media, comprising:
- ~~determining a media type of the flash media;~~
 - ~~building a physical to logical table mapping physical storage locations to physical storage locations based on the type of flash media;~~
 - ~~searching the flash media for a file header corresponding to a selected file type using the physical-to-logical table; and~~
 - ~~reading data from the raw flash data based on information in the file header.~~
12. (Currently Amended) ~~The method of claim 11, further comprising~~ A method for recovering data from flash media, comprising:
- determining a media type of the flash media;
 - building a physical-to-logical table mapping physical storage locations to physical storage locations based on the type of flash media;
 - searching the flash media for a file header corresponding to a selected file type using the physical-to-logical table;
 - reading data from the raw flash data based on information in the file header;
- defining an application program interface (API) comprising a plurality of respective sets of pass-through commands, each respective set to enable a software program to low-level access a particular type of flash media corresponding to that set of pass-through commands; and
- building the physical-to-logical table with a the software program using the set of pass-through commands corresponding to the media type of the flash media.
13. (Original) The method of claim 12, wherein a set of pass-through commands are employed to access a SmartMedia-compatible flash media device.

14. (Original) The method of claim 12, wherein the set of pass-through commands are employed to access a Sony Memory Stick-compatible flash media device.

15. (Currently Amended) A machine-readable media having instructions tangibly stored thereon, which when executed recover data from corrupted flash media by performing operations including:

accessing raw flash data stored on the flash media using a low-level access mechanism by applying an application program interface (API) comprising a set of callable pass-through commands to enable low-level access to the flash media;

searching the raw flash data for file indicia corresponding to a selected file type; and
reading data from the raw flash data based on information in the file indicia, said data comprising a recovered file.

16. (Original) The machine-readable media of claim 15, wherein execution of the instructions further perform the operation of providing a user interface by which a user may select specific file types for which to search the flash media to recover corresponding files for.

17. (Original) The machine-readable media of claim 15, wherein execution of the instructions further perform the operation of:

building a physical-to-logical table mapping physical storage locations to logical storage locations; and

sequentially searching through logical sectors in search of the file indicia based on the physical-to-logical table.

18. (Currently Amended) The machine-readable media of claim 17, ~~further having instructions stored thereon corresponding to an application program interface (API) comprising a set of~~

~~callable pass-through commands to enable low-level access to the flash media using, and wherein~~
the physical-to-logical table is built using the pass-through commands.

19. (Original) The machine-readable media of claim 15, wherein the file indicia comprises a file header, and in response to finding a file header execution of the instructions further perform the operations of:

extracting a file size from the file header corresponding to a file;

reading data beginning with the file header or a starting point identified by the file header up to the file size to recover the file.

20. (Original) The machine-readable media of claim 15, wherein execution of the instructions further perform the operation of:

determining a starting location from which to search the flash media; and sequentially searching through the flash media for file indicia using one of a physical or logical storage sequence.

REMARKS/ARGUMENTS

Claims 1–8, 10, and 12–20 are pending in the application. Claims 9 and 11 have been canceled. No new matter has been added.

The applicants thank Examiner for indicating that claims 12, 13, and 14 would be allowable if rewritten in independent form. Claim 12 has been amended to be in independent form and includes all of the limitations of the base claim and any intervening claims. Claims 13 and 14 now depend from independent claim 12.

The foregoing amendments and the following arguments are provided to impart precision to the claims by more particularly pointing out the invention rather than to avoid prior art.

Specification

The specification has been amended to properly indicate trademarks CompactFlash,

SmartMedia, Memory Stick, MultiMediaCard, Secure Digital, and XD.

Claim Objections

Examiner objected to Claim 7 because in line 2-3 of claim 7 it reads “performing the of: ...”, when it appears from the context that it should properly read “performing the steps of: ...”. Claim 7 has been amended as suggested by Examiner.

Examiner objected to Claim 8 because in lines 3-4 of claim 18 it reads “access to the flash media using, and wherein the physical ...,” when it appears from the context that it should properly read “access to the flash media, and wherein the physical ...”. Claim 18 has been amended as suggested by Examiner.

Double Patenting Rejections

Examiner rejected Claims 1-3, 6-8, 11, 15, 17, 19, and 20 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 5, 6, 7, and 11 of U.S. Patent No. 6,839,864, Mambakkam et al, published January 4, 2005. Applicants respectfully traverse this rejection.

The Examiner states that a timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome this double patenting rejection provided the conflicting patent is shown to be commonly owned with the present application. Applicants assert that a terminal disclaimer is not required in this case because the asserted obvious-type double patenting rejection is improper. MPEP §804(II)(B)(1)(b) states, “where, through no fault of the applicant, the claims in a later filed application issue first, an obvious-type double patenting rejection is improper, in the absence of a two-way obviousness determination, because the applicant does not have complete control over the rate of progress of a patent application through the Office. *In re Braat*, 937 F.2d 589, 19 USPQ2d 1289 (Fed. Cir. 1991).” In the present case, U.S. Patent Application No. 10/253,547, which ripened into the ‘864 patent, was originally filed on September 23, 2002

and issued on January 4, 2005. The present application was filed on September 4, 2002, is cited as a reference in the '864 patent, and a first office action in the present application was not mailed by the Office until August 24, 2005. Essentially, the application for the '862 patent was filed almost a month after the present application and issued as the '862 patent more than seven months before a first office action in the present application was even mailed from the Office.

Clearly, the fact that the claims in the later filed application issued first is through no fault of the applicants. Accordingly, the asserted obvious-type double patenting rejection is improper. Moreover, "the obviousness-type double patenting rejection is appropriate only if the claims of the two patents cross-read, meaning that "the test is whether the subject matter of the claims of the patent sought to be invalidated would have been obvious from the subject matter of the claims of the other patent, and vice versa."” *In re Dembiczak*, 175 F.3d 994, 1002 (Fed. Cir. 1999) citing *Carman Indus., Inc. v. Wahl*, 724 F.2d 932, 939-940 (Fed. Cir. 1983). Accordingly, applicants assert that any two-way obviousness determination in this case is also improper because any distinguishing elements or improvements disclosed in the later filed application were not obvious to one of ordinary skill in the art at the time of the filing of the present application.

Applicants respectfully request withdrawal of this rejection.

35 U.S.C. § 102 Rejections

Examiner rejected claims 1-5, 8-10, 15, 16, and 20 under 35 U.S.C. 102(a) as being anticipated by "Building the Ultimate Photo Recovery Kit", by Rob Galbraith, published January 23, 2002 (hereinafter "Galbraith"), with inherit features further disclosed in the DataRescue PhotoRescueTM. Specifications, archived August 27, 2001, <http://web.archive.org/web/20010827073251/www.datarescue.com/photorescue/spec.htm>, hereinafter PhotoRescueTM Specifications, and EasyRecoveryTM Professional Edition User Guide, Copyrighted 2000 (hereinafter "EasyRecovery").

A claim is anticipated:

“only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). MPEP §2131.

Currently amended claim 1 recites, among others, “accessing the flash media at a low level to access raw flash data stored on the flash media by defining an application program interface (API) comprising a set of pass-through commands to enable a software program to low-level access of the flash media using the set of pass-through commands.” None of the references cited by Examiner—Galbraith, EasyRecovery, and Wells—discloses this limitation. Galbraith is silent about defining an application program interface (API) comprising a set of pass-through commands to enable a software program to low-level access of the flash media.

Moreover, extra references do not show that “defining an application program interface (API) comprising a set of pass-through commands to enable a software program to low-level access of the flash media” is an inherent characteristic of Galbraith. When an extra reference is cited to show an inherent characteristic of the primary reference:

“To serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. ***Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference***, and that it would be so recognized by persons of ordinary skill.” *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991). MPEP §2131.01(III) (emphasis added).

While Examiner indicates that the limitation is inherent in Galbraith and cites EasyRecovery as support, EasyRecovery does not “make clear that the missing descriptive matter is necessarily present in the thing described in the reference.” In fact, EasyRecovery does not even mention anything about using pass-through commands or defining an API. As such, Galbraith does not

anticipate amended independent claim 1 and its dependent claims 2-5, 8, and 10.

Similarly, currently amended claim 15 also recites “accessing raw flash data stored on the flash media using a low-level access mechanism by applying an application program interface (API) comprising a set of callable pass-through commands to enable low-level access to the flash media.” As discussed above, none of the references cited by Examiner—Galbraith, EasyRecovery, and Wells—discloses this limitation. As such, claim 15 and its dependent claims 16-20 are in condition for allowance.

35 U.S.C. § 103 Rejections

Examiner rejected claims 6, 7, 11, 17, and 19 under 35 U.S.C. 103(a) as being unpatentable over Galbraith in view of Wells et al., United States Patent number 5,437,020, published July 25, 1995.

Claims 6 and 7 depend from amended claim 1, and claims 17 and 19 depend from amended claim 15. Wells fails to add limitations that are not disclosed in Galbraith and EasyRecovery. That is, Wells does not disclose “accessing the flash media at a low level to access raw flash data stored on the flash media by defining an application program interface (API) comprising a set of pass-through commands to enable a software program to low-level access of the flash media using the set of pass-through commands” as recited in independent claims 1 and 15. As such, claims 6, 7, 17, and 19 are not rendered obvious and in condition for allowance.

35 U.S.C. § 101 Rejections

The Examiner rejected Claims 15-20 under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Independent claim 15 has been amended to recite “a machine-readable media having instructions tangibly stored.” As such, the claimed invention as recited in amended independent claim 15 and its dependent claims (claims 16-20) are directed to statutory subject matter.

Applicants respectfully request withdrawal of this rejection.

CONCLUSION

Applicants respectfully submit the present application is in condition for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call John Ward at (650) 328-8500.

Respectfully submitted,



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